

# ZAMBIA

1997-2005

**Total Country Population (2005)** 11.3 million

## Project Catchment Areas

60 sites in 6 districts: Ndola and Kitwe in Copperbelt Province, Kabwe and Kapi i-Mposhi in Central Province, and Livingstone and Choma in Southern Province

## Program Context

The 2002 UNAIDS estimated that 21.5 percent of Zambians between 15-49 years old were infected with HIV at the end of 2001, with the rate rising to 25 percent among young women and 31 percent among women in urban antenatal care clinics. Approximately 25,000 infants, representing over one-third of infants born to HIV-infected women, are infected annually in utero, during delivery, or through breastfeeding (CBOH 2004).

Because breastfeeding can transmit HIV, infant feeding counseling can help mothers make informed choices of infant feeding methods, balancing breastfeeding's lifesaving benefits with the risk of HIV. Exclusive breastfeeding protects against severe diarrhea and acute respiratory infection, major causes of infant illness and death in sub-Saharan Africa. South African studies suggest that exclusive breastfeeding may protect infants against HIV, while mixed feeding (breastmilk plus breastmilk substitutes) presents the greatest danger. While more than 95 percent of Zambian infants are breastfed during their first year of life, only 26 percent of infants 0-3 months old and 5 percent of infants 4-5 months old are exclusively breastfed.

## Program Profile

In 1997 LINKAGES made an assessment visit to Zambia with the Central Board of Health (CBOH) through the National Food and Nutrition Commission (NFNC). Responding to an NFNC request for assistance in developing guidelines for the National Policy on Breastfeeding Practices and HIV/AIDS Transmission from Mother to Child, LINKAGES reviewed efforts to prevent mother-to-child transmission (PMTCT) and identified resources needed to implement the proposed policy.

The result of this cooperation was a demonstration project focusing on infant feeding in an antenatal clinic in an area of high HIV



prevalence. Ndola District was chosen for the site because of its strong community mobilization against HIV/AIDS. The resulting Ndola Demonstration Project (NDP) piloted the integration of infant feeding and HIV counseling and testing (CT) in maternal and child health (MCH) and community services.

Other districts expressed interest in this groundbreaking approach, and in 2001 the government requested its expansion. In the scale up LINKAGES prioritized activities that would have an immediate impact on CT uptake and facilitate the introduction of antiretroviral (ARV) prophylaxis. These included involvement of provincial health offices in planning and implementation, the introduction of a group counseling model, streamlined data collection, additional human resources for counseling and testing, and development of messages and materials to support CT.

By June 2005 LINKAGES had scaled up to 60 sites in 6 districts in 3 provinces. LINKAGES did not directly implement interventions but provided training, materials, and technical assistance to enable government, NGO, and community partners to promote and support informed infant feeding and PMTCT practices. The project also tested programmatic interventions in 3 districts to strengthen maternal and newborn care services in target health facilities.

The skills, tools, and lessons emerging from LINKAGES' 8-year involvement in Zambia have helped over a dozen African countries begin to overcome the challenge of infant feeding in the context of HIV/AIDS.

## Program Impact

Results from baseline and end-line surveys in two districts showed that HIV counseling and testing uptake increased significantly among

## Components of the Integrated PMTCT Model

- ♦ **Formative research** through focus group discussions, household trials, in-depth interviews, and surveys of mothers and families to gather information on knowledge, attitudes, beliefs, practices, and the local context for infant feeding decisions
- ♦ **Training** in infant feeding in the context of PMTCT and skills building for program managers, health providers, and community workers in counseling, negotiation, and community outreach
- ♦ **Advocacy for national policy** to protect and support safe infant feeding practices and integrated PMTCT that included application of the Global Strategy for Infant and Young Child Feeding, the Baby-Friendly Hospital Initiative, and the International Code of Marketing of Breast-milk Substitutes
- ♦ **Behavior change communication** to develop appropriate targeted strategies, messages, media, and community and health center activities to help mothers make informed infant feeding and reproductive health decisions
- ♦ **Assessment and strengthening of community capacity** for counseling and referrals
- ♦ **Monitoring and evaluation** through collecting and analyzing data with local partners on key infant feeding and PMTCT indicators before and after interventions to improve program planning

mothers. The proportion of mothers who reported being tested for HIV increased from 7 percent in 2002 to 48 percent in 2004 in Livingstone District and from 5 percent in 2000 to 46 percent in 2004 in Ndola. Exclusive breastfeeding also rose, from 50 percent in 2002 to 64 percent in 2004 in Livingstone and from 57 percent in 2000 to 74 percent in 2004 in Ndola.

Other achievements of the project include:

- Fostered national dialogue on HIV and infant feeding policy issues that led to donor and government support for inclusion of infant feeding in PMTCT programs
- Supported the national mandate to make HIV counseling and voluntary testing a routine service and introduced multiple measures to protect the confidentiality of clients
- With the MOH, expanded access to 60 health facilities in 6 districts and trained staff and conducted site assessment in 4 additional districts in anticipation of future PMTCT implementation
- Focused attention on the importance of quality maternal and child health (MCH) care in PMTCT programs by retraining midwives and counselors in antenatal, labor and delivery, and post-partum care and including MCH indicators in monthly data collection
- Developed formative research, M&E, and behavior change communication (BCC) materials and tools for use in PMTCT programs
- Enhanced the knowledge and skills of health providers and community members for improved services and referral, community outreach, and follow-up care and support for HIV-positive mothers and their infants.

## Program Strategies and Activities

LINKAGES/Zambia followed an approach that integrated improved counseling on infant feeding, maternal nutrition, CT, and ARV prophylaxis in health care and community services to enable women to make and act effectively on informed choice to feed their infants optimally in the context of high HIV prevalence. The components of the integrated PMTCT model are shown in box 1 above.

**Formative research** was conducted in Ndola District to develop locally appropriate and feasible infant feeding recommendations for HIV-positive and HIV-negative mothers and their families. The research included focus group discussions, key informant interviews, and observation of household food preparation and feeding, a market survey of replacement foods and breastmilk substitutes, and household trials of improved feeding and caring practices. Results informed subsequent policy, behavior change communication, training, and monitoring and evaluation strategies. In the expansion districts, LINKAGES and the district health management teams (DHMTs) conducted site assessments to determine readiness to implement integrated PMTCT services.

**Policy and Advocacy.** LINKAGES worked closely with the CBOH to develop the National Infant and Young Child Feeding Guidelines, National Food and Nutrition Policy, National Policy on Breastfeeding Practice and HIV Transmission from Mother to Child, Guidelines for Maternity Protection, Guidelines on Nutritional Care and Support for People Living with HIV/AIDS (PLWHA), and the Policy and National Regulation on Marketing of Breast-milk Substitutes. The National Infant and Young Child Feeding (IYCF) Guidelines and the National Regulation on

## Infant Feeding Counseling

Counseling women to make an informed infant feeding choice is a major component of the integrated PMTCT approach. LINKAGES trained health workers and community service providers to counsel women sensitively and accurately on the safest feeding options for their situation. Infant feeding counseling messages are listed below.

### **For HIV-negative women or women of unknown status**

- Exclusive breastfeeding for the first 6 months
- Introduction of complementary foods at about 6 months
- Continued breastfeeding up to 2 years

### **For HIV-positive women**

- Exclusive breastfeeding for the first 6 months
- Expressing, heat treating, and cup feeding breastmilk
- Wet nursing by an HIV-negative woman
- Transitioning (early cessation) from breastfeeding to replacement feeding by cup with commercial or home-prepared formula

### **For all women, regardless of HIV status**

- Avoidance of mixed feeding (breastfeeding plus breastmilk substitutes)
- Introduction at about 6 months of safe and appropriate soft staple foods and other locally available foods to be fed at least 3 times a day
- Prevention of HIV and sexually transmitted infections (STIs)
- Use of antenatal, labor and delivery, and postpartum health services
- Prevention of unwanted pregnancies
- Voluntary counseling and testing
- Optimal maternal nutrition during pregnancy and lactation

Marketing of Breast-Milk Substitutes were nearing legislation in mid-2005. LINKAGES also supported national and district efforts to celebrate annual World Breastfeeding Week and World AIDS Day.

**Behavior Change Strategies.** In the first years of the program, BCC interventions focused on raising awareness about infant feeding and PMTCT and developing strong community support and quality counseling by health workers. In 2002 LINKAGES developed a strategy to increase uptake of HIV counseling and testing through incorporating BCC methodologies in

training curricula and participated in developing a national PMTCT communication strategy. In 2004 an intensive “Act Now!” materials and media campaign was launched, including brochures, posters, radio and television spots, billboards and a reference guide for health providers. Messages were targeted to pregnant and lactating women, health providers, youth, and community leaders. The media spots were broadcast nationally for 6 months, and the print materials were distributed to LINKAGES sites and reproduced by the CBOH for national dissemination.

**Capacity Building.** In the NDP LINKAGES and its partners developed a training program to help health workers and community service providers introduce and sustain infant feeding counseling and VCT services in target clinics. The program scale up required training more health providers in PMTCT and infant feeding counseling, as well as in HIV testing and Nevirapine protocols. The focus on community support and referrals also demanded a new approach to training community service providers.

The 12-day infant feeding and PMTCT course introduced in the NDP built on existing infant feeding, HIV/AIDS, and reproductive health curricula and covered lactation, infant feeding in the context of HIV/AIDS, epidemiology and treatment of HIV/AIDS, management of sexually transmitted and opportunistic infections, CT, and basic counseling. The 594 participants in this training observed breastfeeding practices at health facilities, learned about the experience of people living with HIV/AIDS, and prepared replacement feeds under conditions similar to those faced by most women. Nevirapine protocols, same-day HIV testing, BCC methodologies, and PMTCT monitoring and reporting were later added. In 2004 this course was replaced by the CBOH national curriculum, to which LINKAGES provided major technical contributions.

In the NDP, a 6-day training of trainers (TOT) was held for participants from the 12-day course to enable them to conduct training in health facilities and communities. In the scale-up phase, LINKAGES helped provincial health offices expand this pool of trainers.

In the expansion sites LINKAGES gave a 6-day abridged course in infant feeding counseling for 133 clinical counselors already trained by other organizations. The program also provided refresher training in safe delivery techniques for 151 nurses and midwives in selected districts as part of the MCH Link to PMTCT Initiative implemented in 2004 in Kabwe, Livingstone, and Ndola Districts to strengthen MCH elements of PMTCT services.

A 6-day PMTCT course was given to 526 community motivators, and LINKAGES trained lay counselors in Choma District to offset the shortage and attrition of trained HIV counselors.

**Monitoring and evaluation.** LINKAGES/Zambia aimed to increase infant feeding and PMTCT knowledge and skills, improve exclusive breastfeeding rates, and increase HIV counseling and testing acceptability. To measure success against these indicators, LINKAGES implemented a multi-component monitoring and evaluation approach that included baseline and follow-up household and clinic surveys in selected districts, cost and effectiveness studies, and a media evaluation to assess the effectiveness of BCC interventions.

LINKAGES provided technical assistance to develop and implement new tracking mechanisms to capture infant feeding data and measure the number of women who received antenatal care who were counseled and tested for HIV. In the scale-up sites, appropriate tracking of mother-infant pairs for Nevirapine required referrals to community care and support services. LINKAGES developed a simple monitoring tool for trained community motivators and built DHMT capacity to capture and report indicator data and use data for decision making. DHMT site coordinators were trained to oversee collection of service data and quarterly results reporting, supervise and monitor practices, and visit community groups to promote PMTCT and optimal IYCF. This innovation enabled regular data review and follow up with remedial action.

## Lessons Learned

- Taking services to scale and improving quality may be incompatible goals without significant additional personnel and funding.
- Tracking PMTCT data requires full government support and partner cooperation. Harmoniza-

tion of indicators is key, and the fewer the better. Greater attention needs to be given to infant feeding indicators.

- Community involvement in PMTCT requires commitment from the health system and donor assistance for early development of a community BCC strategy, capacity building of community volunteers, and strong referral systems.
- Men need to be sensitized on HIV/AIDS and PMTCT in culturally “safe” environments outside of the MCH system.
- Women are motivated to be counseled and tested for HIV if they trust that health providers will maintain confidentiality and have access to ARVs and community care.
- Partnering is critical, adding breadth and depth but also the complexity of joint planning and implementation. LINKAGES depended on various government, donor, and NGO partners to create the integrated package of services envisioned for quality PMTCT. These partners included the CBOH, NFNC, DHMTs, provincial health offices, Centers for Disease Control and Prevention, Hope Humana, Horizons, International HIV/AIDS Alliance, NetMark, Zambia Counseling Council, Zambia VCT Partnership, and Zambia Voluntary Counseling and Testing Services.
- Training isn’t the end all; good supervision and mentoring must follow.
- Scaling up is more cost-effective than pilot projects but not more efficient. With expanded coverage and scale, the cost per beneficiary goes down but the impact may not be as great.
- An integrated MCH and PMTCT approach, while challenging to implement, potentially better serves mother and child.
- MCH and newborn services should not be lost in the effort to rapidly expand PMTCT services.

**LINKAGES** is a USAID-funded program providing technical information, assistance, and training to organizations on breastfeeding, related complementary feeding and maternal dietary practices, the lactational amenorrhea method (a modern post-partum method of contraception for women who breastfeed), and PMTCT (to help mothers understand the balance of risks so they can make informed infant feeding choices).

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*WORLD LINKAGES* is a publication of LINKAGES: Breastfeeding, LAM, Related Complementary Feeding, and Maternal Nutrition Program, and was made possible through support provided to the Academy for Educational Development (AED) by the United States Agency for International Development (USAID), under the terms of Cooperative Agreement No. HRN-A-00-97-00007-00. The opinions expressed herein are those of the author(s) and do not necessarily reflect the views of USAID or AED.

